IN THE CLAIMS:

1. (Currently Amended) A method of kinetic spray coating a substrate comprising the steps of:

a) providing particles of a powder;

b) injecting the particles into a gas/powder exchange chamber and entraining the particles into a flow of a main gas in the gas/powder exchange chamber, the main gas at a temperature insufficient to heat the particles to a temperature above a melting temperature of the particles;

c) directing the particles entrained in the main gas [[in]] from the gas/powder exchange chamber into a powder/gas conditioning chamber different than the gas/powder exchange chamber and having a length along a longitudinal axis of equal to or greater than 20 millimeters;

increasing a residence time and the temperature of the particles as a result of the directing of the particles along the length of the powder/gas conditioning chamber; and

d) directing the particles entrained in the flow of gas from the conditioning chamber into a converging diverging supersonic nozzle, thereby accelerating the particles to a velocity sufficient to result in adherence of the particles on a substrate positioned opposite the nozzle.

2. (Original) The method as recited in claim 1, wherein step a) comprises providing as the particles at least one of an alloy, a metal, a ceramic, a polymer, a metal coated ceramic, a semiconductor, or mixtures thereof.

3. (Original) The method as recited in claim 1, wherein step a) comprises providing particles having an average nominal diameter of from about 1 microns to 250 microns.

4. (Original) The method as recited in claim 1, wherein step b) comprises injecting the particles under a pressure that is from about 5 to 300 pounds per square inch above a pressure of the main gas.

5. (Original) The method as recited in claim 1, wherein the main gas is at a temperature of from about 200 to 1000 degrees Celsius

6. (Original) The method as recited in claim 1, wherein step b) comprises injecting the particles parallel to a longitudinal axis of the gas/powder exchange chamber.

7. (Original) The method as recited in claim 1, wherein step b) comprises injecting the particles at one of an oblique angle relative to a longitudinal axis of the gas/powder exchange chamber or at a tangential angle relative to the gas/powder exchange chamber.

8. (Original) The method as recited in claim 1, wherein step c) comprises directing the entrained particles into a powder/gas conditioning chamber having a longitudinal axis of from about 20 millimeters to about 1000 millimeters.

9. (Original) The method as recited in claim 1, wherein step d) comprises accelerating the particles to a velocity of from about 200 to about 1500 meters per second.

10. (Original) The method as recited in claim 1, wherein step d) comprises providing a substrate comprising at least one of a metal, an alloy, a plastic, a polymer, a ceramic, a wood, a semiconductor or a mixture thereof.

11-20. (Cancelled)

Please add the following new claims.

21. (New) The method as recited in claim 1, wherein the temperature of the particles is increased at least 150 degrees Kelvin as a result of the powder/gas conditioning chamber.